

### REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 2-13, 37-38 and 40-41 are pending in the application. Claims 1, 33-36 and 39 have been cancelled without prejudice or disclaimer. Claims 2, 8, and 11 have been amended to depend on claim 7. New claims 40-41 have been added to provide Applicants with the scope of protection to which they are believed entitled. No new matter has been introduced through the foregoing amendments.

The new grounds of rejection relying on *Hata* (U.S. Patent No. 6,649,942) are noted. Applicants respectfully traverse the 35 U.S.C. 102(a) rejection of at least independent claim 7, because the reference fails to teach or disclose that the hydrogen-storing alloy has a thickness of 10Å to 100Å. This claimed feature has been discussed in the specification, e.g., at the paragraph bridging pages 17-18. In particular, for sufficient absorption of hydrogen, the thickness of the hydrogen-storing alloy layer has to be at least 10Å. Additionally, the thickness of the hydrogen-storing alloy layer has to be at or below 100Å in order to prevent deterioration of light transmittance. Therefore, the 10Å to 100Å thickness range of the alloy layer is novel and non-obvious when the alloy is a hydrogen-storing alloy.

*Hata* discloses that "a Pd film has a thickness of about 2nm" at column 6, lines 52-53. Although the *Hata* disclosed thickness of about 2nm (20Å) falls within the claimed range, it is the thickness of a Pd film which neither is an alloy nor features hydrogen storage capability.

*Hata* further discloses that "a film of a hydrogen storage alloy may be employed in place of the Pd film" at column 25, lines 47-51. However, the reference is completely silent on what thickness such hydrogen storage alloy should have.

Therefore, Applicants respectfully submit that *Hata* does not include an enabling disclosure of the claimed hydrogen-storing alloy that has a thickness of 10Å to 100Å. The anticipatory rejection of claim 7 is believed improper and should be withdrawn.

All pending dependent claims depend from claim 7, and are considered patentable at least for the reason advanced with respect to claim 7.

As to claim 6, Applicants respectfully submit that *Hata* fails to teach or suggest that the Mg-based hydrogen-storing alloy is ZnMg. The Examiner's reliance on column 25, lines 46-67 of *Hata* for the claimed limitation is noted. However, none of the alloys disclosed in the cited passage contain Zn. It should be noted that element "L" (column 25, lines 59-61) represents a misch metal prepared from a lanthanoid element or a mixture of a rare earth element. Therefore, element "L" includes the following series of 17 elements: the lanthanides (La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu), Sc and Y. Apparently, none of the elements in the *Hata* "L" series is Zn. Thus, the reference fails to teach or suggest the claimed ZnMg alloy.

As to new claim 40 which finds support in original claim 3, Applicants respectfully submit that *Hata* fails to teach or suggest that the hydrogen-storing alloy is MnNiFe. The Examiner's reliance on column 25, lines 46-67 of *Hata* for the claimed limitation is noted. Only two of the alloys disclosed in the cited passage contain Fe, namely, TiFe and  $\text{TiFe}_{1-x}\text{Mn}_x$  ( $x \sim 0.15$ ). See *Hata* at column 25, lines 54-55. However, the two alloys do not contain Ni, unlike the claimed alloy. Thus, the reference fails to teach or suggest the claimed MnNiFe alloy.

As to new claim 41 which finds support in original claim 5, Applicants respectfully submit that *Hata* fails to teach or suggest that the hydrogen-storing alloy is ZnNi. The Examiner's reliance on column 25, lines 46-67 of *Hata* for the claimed limitation is noted. However, none of the alloys disclosed in the cited passage contain Zn as discussed above with respect to claim 6. Thus, the reference fails to teach or suggest the claimed ZnNi alloy.

The remaining issues are either moot or believed overcome in view of the above amendments/arguments.


Each of the Examiner's rejections has been traversed/overcome. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

**LOWE HAUPTMAN & BERNER, LLP**

  
Benjamin U. Hauptman  
Registration No. 29,310

*USPTO Customer No. 22429*  
1700 Diagonal Road, Suite 310  
Alexandria, VA 22314  
(703) 684-1111 BJH/KL/ayw  
(703) 518-5499 Facsimile  
**Date: June 9, 2006**